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ABSTRACT

Seldom are college students introduced to theories that describe how they and other students change intellectually during their college years. Two epistemological perspectives on cognitive development in college students and how they can be presented to students are examined in this paper. The first perspective is William Perry's forms of intellectual and ethical development, which was based on white middle and upper class American college students. Three clusters of students were identified by Perry: Dualism, students who organize their thinking into discrete dichotomies; Relativism, students who recognize that knowledge, opinions, and value are relativistic and contextual; and Commitment, where students make choices about their values, careers, relationships, and other matters. The second perspective, devised by Belenky, Clinchy, Goldberger, and Tarule, is called Women's Ways of Knowing. This orientation was based on interviews with 135 women of widely different ages, circumstances, and background. Participants' "ways of knowing" were grouped into five categories: Silence, Received Knowledge, Subjective Knowledge, Procedural Knowledge, and Constructed Knowledge. An overview on each of these categories is offered here. It is argued that both Perry and Belenky et al. place differences in students' assumptions about knowing on a continuum where reliance on authority, certainty of knowledge, and individual agency are the key variables. (RJM)

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# EPISTEMOLOGICAL PERSPECTIVES ON COGNITIVE DEVELOPMENT IN COLLEGE STUDENTS:

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## Perry's Scheme and Women's Ways of Knowing

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Perry's Scheme and Women's Ways of Knowing

Paul Hettich Barat College

Students who complete an introductory psychology course are usually exposed to theories of development such as those formulated by Sigmund Freud, Erik Erikson, and Jean Piaget. Seldom are students introduced to theories that describe how they and other students change intellectually during the college years. What assumptions about the processes of knowing do college students possess as they approach a body of knowledge? What changes occur developmentally in the process of seeking knowledge?

This symposium examines four epistemological perspectives on cognitive development in college students: The work William Perry and Mary Belenky and her associates (which I will introduce), and the perspectives of Patricia King and Karen Kitchener, and Marcia Baxter Magolda (which Professor Baxter Magolda will present).

The populations sampled for the Perry and Baxter Magolda studies are exclusively young adult, primarily white middle and upper class American college students. Belenky and her associates and King and Kitchener also included diverse samples of college and non-college students. The Baxter Magolda and King and Kitchener findings are derived from ongoing longitudinal research. The methodology used by each investigator was primarily qualitative. Specific procedures for coding and rating interview responses and assessing reliability of measures are not discussed here, but they can be found in the original sources.

## William Perry's Forms of Intellectual and Ethical Development

Between 1954 and 1963 William Perry and his associates interviewed samples of Harvard men and Radcliffe women each Spring regarding their college

experiences. Although 112 men and 28 women participated in the study, gender differences were not observed and only the responses from males were used. Analysis of the interview data yielded a nine-stage sequence of "positions" that provided a developmental framework for understanding the meaning of students' educational experiences. This "scheme of intellectual and moral development" (Perry, 1970) reflects the increasingly complex epistemological assumptions that students bring to a learning situation. Perry reduced the nine positions to three clusters: Dualism modified (positions 1 to 3), Relativism discovered (positions 4 to 6), and Commitment in relativism developed (positions 6 through 9). However, other researchers group the nine positions into four categories: Dualism (positions 1 and 2) , Multiplicity (positions 3 and 4), Relativism (positions 5 and 6), and Commitment in relativism (positions 7 through 9).

Dualistic students tend to organize their thinking about issues into discrete categories of right and wrong, good and bad, or we and they. Knowledge is absolute. There is a correct solution to each problem. Authorities know the right answers and a student's job is to memorize them. Knowledge is quantitative and certain; agency (source of control) exists "out there" in authority.

In the Multiplicity stage of epistemological development, students admit to the legitimacy of opinions and values that are different, but only because the right answers are not yet known. Consequently, because judgments can not be made where correct answers are unknown, everyone's point of view is equally valid.

Students in Relativism begin to recognize that knowledge, opinions and values are relativistic and contextual (including those of authorities). That is, when beliefs are rooted in logic, evidence, and particular situations or contexts, they may be correct, but if they are not so anchored, beliefs may be worthless. Students foresee the need to make decisions about their values and choices, but they have not yet

acted.

In the fourth and highest developmental stage, Commitment, students make choices about their values, careers, relationships, and other matters relating to identity, even though they are aware of the diverse and uncertain (i. e., relativistic) contexts surrounding those issues. By this stage, they experience agency primarily from within, not from external authorities.

Perry adds that during the process of development, students may experience temporizing (postponing movement for a year), escape (abandonment of their responsibility, or exploitation of one stage to avoid a higher stage), or retreat (avoiding complexity and ambivalence by regressing to Dualism) (Perry, 1981).

What is the significance of Perry's work for teaching? First, Perry encourages teachers to teach "dialectically," i.e, "to introduce our students, as our greatest teachers introduced us, not only to the orderly certainties of our subject matter but to its unresolved dilemmas. This is an art that requires timing, learned only by paying close attention to students' ways of making meaning" (1981, p. 109). Second, some research suggests that instruction can be designed to facilitate development along Perry's scheme (Pascarella & Terenzini, 1991; Nelson,1989 ; Moore 1994). In addition, Moore applies the Perry scheme to the assessment of collaborative learning (Moore, 1995), but maintains that the most fundamental implication of Perry's work is the greater empathy it provides faculty for the struggles students face dealing with the complexities of college (Moore, 1994).

According to Pascarella and Terenzini (1991), Perry has been criticized for insufficiently defining and measuring changes in the nine positions, although scoring systems have been developed by other researchers. In addition, Perry's claims that three-fourths of his participants reached the commitment stage by graduation were not substantiated by subsequent research. Although Perry's work seems to have received

limited support by research, it has been a popular subject at numerous higher education conferences and teaching workshops for the past two decades. Perry's scheme has stimulated many teachers to reexamine the assumptions they have about students' levels of knowing. One of the most significant consequences of Perry's work was his influence on the next perspective.

Belenky, Clinchy, Goldberger, & Tarule: Women's Ways of Knowing (WWK)

Noting the absence of research on the intellectual development of women, Mary Field Belenky, Blythe McVicker Clinchy, Nancy Rule Goldberger, and Jill Mattuck Tarule integrated Carol Gilligan's research on moral development and identity in women with Perry's scheme of epistemological development. In Women's Ways of Knowing (1986), Belenky et al. describe the results of their interviews with 135 women of widely different ages, circumstances, and backgrounds. Ninety were college students from six diverse academic institutions that included a prestigious women's college, an inner city community college, and an urban public high school. Forty-five were clients of three family agencies that worked with teenage mothers, parents enrolled a prevention oriented children's health program, and parents with a history of family violence and child abuse.

Belenky and her associates grouped their participants' "ways of knowing" into five categories: Silence, Received Knowledge, Subjective Knowledge, Procedural Knowledge, and Constructed Knowledge. The authors maintain that the five perspectives are neither exhaustive, fixed, nor universal and that similar categories may be found in the thinking of men. Just as Perry contended that his scheme of development applied to both genders, Belenky et al. do not claim that the five patterns of women's knowing is exclusive to women.

In the least developed way of knowing, Silence, "women experience themselves as mindless and voiceless and subject to the whims of external authority"

(p. 15) . As one woman remarked,

> I didn't think I had a right to think. That probably goes back to my folks. When my father yelled, everybody automatically jumped. Every woman I ever saw, then, the man barked and the woman jumped. I just thought that women were no good and had to be told everything to do. (p. 30)

Silent women were fewest in number and among the youngest and most socio-economically and educationally disadvantaged of the five groups. Their perspective was included because it represents an absence of voice, i.e., a position of extreme denial of self and blind obedience to external authority. Perry's scheme does not, predictably, have a counterpart to Silence, given his sample of Harvard and Radcliffe students.

Received Knowledge is a perspective "from which women conceive of themselves as capable of receiving, even reproducing, knowledge from the all-knowing external authorities but not capable of creating knowledge on their own" (p. 15). Like Perry's dualistic thinkers, received knowers view ideas as right or wrong, good or bad, and have little tolerance for ambiguity. Unlike Perry's men who identified with and publicly repeated the ideas of authority, the women in this study did neither. They preferred to listen. One college student noted "I don't talk in class very much myself. I am not a participator. Everybody at college is sort of outgoing. Everybody I've met has a vocabulary a mile long. My problem is -- is that I have trouble communicating" (p. 37). Most of the received knowers in the sample were from the social service agencies or young, new college students.

Subjective Knowledge is "a perspective from which truth and knowledge are conceived as personal, private, and subjectively known or intuited" (p. 15). Belenky et al. regard subjective knowing as a form of dualistic thinking in which the woman has shifted the source of authority from external to a newly forming inner voice.

> Every person has her own unique body of knowledge that's been given to them through their life's experiences. And realizing that mine is as valid as the next person's, whether or not that person has gone through six or seven years of college, I feel that my knowledge is as important and real and valuable as theirs is. (p. 69)

Whether they grow up in advantaged or disadvantaged situations, the women in this sample distrusted logic and analysis and tended to disregard the advice of external authorities. Belenky and her associates agree that subjective knowing is, for the most part, interchangeable with Perry's Multiplicity. However, gender differences exist between some socio-economically advantaged and disadvantaged knowers due to the opportunities which men and advantaged women have for experiencing and exploring other roles and cultures. Comprising about half of the sample, subjective knowers were found in all age, class and ethnic groups and in every educational and agency setting; over half reported that they were victims of sexual abuse.

Procedural Knowledge "is a position in which women are invested in learning and applying objective procedures for obtaining and communicating knowledge" (p. 15). Procedural knowing arises from the conflict that occurs when teachers demand that personal opinion be supported by evidence. There are two forms of procedural knowing. Separate knowers rely on "impersonal procedures for establishing truth" (p. 102) such as the methods of critical thinking taught in the academic disciplines. They understand the importance of careful observation, objective procedures, and emotional detachment. Connected knowers appreciate the value of observation and analysis, but they realize that personal experience is an important part of knowledge. Connected knowers begin with an interest in the facts of other people's lives,

> but they gradually shift the focus to other people's ways of thinking...Separate knowers learn through explicit formal instruction how to adopt

> a different lens - how, for example, to think like a sociologist. Connected knowers learn through empathy. Both learn to get out from behind their own eyes and use a different lens, in one case the lens of a discipline, in the other the lens of another person. (p. 115)

Most procedural knowers were young, bright, privileged women attending or recently graduated from prestigious colleges.

In Constructed Knowledge, "women view all knowledge as contextual, experience themselves as creators of knowledge, and value both subjective and objective strategies for knowing" (p. 15). In other words, separate and connected knowing are integrated because personal experience is evaluated using the data of specific contexts. Constructed knowers believe that knowing is a process of the knower interacting with the known; the truth of ideas resides within the context of the situation. As one woman noted "Circumstances change. Our way of looking at things change. Time may have given us what we think are right answers, but it also gives us a different set of problems" (p. 138). Constructed knowers were described as articulate, reflective, passionate knowers, intent on having an impact on others and a voice of their own. They were ordinary women, not necessarily high achievers, seeking to balance several roles and commitments. Belenky and her associates note that while Perry's men described their commitments primarily in terms of a single act, usually a career, the constructed knowers also acknowledged the centrality of commitment to relationships.

What implications do the ideas in Women's Ways of Knowing have on teaching and learning? In their discussion of connected teaching, the authors express preference for the teacher-as-midwife metaphor of teaching (helping students give birth to ideas) over the teacher-as-banker metaphor (transferring knowledge from teacher to students). Teachers who are connected knowers accept the subjective

knowing view that each student has a unique perspective. However, they endeavor to transform students' private truths into publicly available "objects" by emphasizing connecting over separation, understanding over assessment, and collaboration over debate (Belenky et al., 1986).

Belenky, Clinchy, Goldberger and Tarule maintain that women, especially older women returning to college, need confirmation that they are already knowers, not just potential knowers. Furthermore, the older, returning students in their study sought a balance in their course work between no structure and excessive structure.

In Knowledge, difference, and power: Essays inspired by Women's Ways of Knowing (1996), Goldberger, Tarule, Clinchy, and Belenky and their associates: (a) respond to issues raised in their 1986 study (e.g., the nature of their theory as constructivism vs. essentialism, the hierarchical relation among ways of knowing), (b) apply their findings to teaching, law, women's studies, psychotherapy, girls epistemological development, and color and class, and (c) address new directions of application such as connected and collaborative knowing, and culture and power.

With respect to teaching, Stanton (Goldberger, et. al, 1996) reports on studies inspired by Women's Ways of Knowing conducted in diverse disciplines (e.g., nursing, economics, composition, occupational therapy). These studies question the relationship between the knowledge base of a discipline, its pedagogy, and the epistemological assumptions held by teachers and students. Similarly, the Belenky et. al model views teaching as inquiry, as a process of raising such questions as: Who is the learner? What does the learner bring to the process?

Teaching is also the challenge of translating the concepts of voice (students' ability to formulate and express their thoughts) and connection (connected teaching and connected knowing) into action. For instance, components in Blythe Clinchy's developmental psychology class would include discussion of students' common sense

views, personal narrative,.journal writing, interviews, designing experiments and data collection (Stanton, 1996). Clinchy discusses in depth the relation between separate and connected knowing and applies it to collaboration in "knowing communities (Clinchy, 1996).

In conclusion, Perry and Belenky et. al place differences in students' assumptions about knowing on a continuum where reliance on authority, certainty of knowledge and individual agency are the key variables. Their perspectives challenges teachers to recognize the levels of knowing in their students and use methods that promote higher levels of knowing. However, each perspective leaves many questions unanswered, such as When do changes occur? What characteristics differentiate those who change substantially from those who don't? What is the role of classroom and non-classroom factors on change? What is the role of age and cultural factors on these changes? Professor Baxter Magolda will discuss her work and that of King and Kitchener and examine the implications of these perspectives for teaching and learning.

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Notes

Portions of this paper are contained in Hettich, P. I. (1996). Epistemological approaches to cognitive development in college students. In P. Sutherland (Ed.). Adult learning: A reader (pp. 46 - 57). London: Kogan Page.

## PERRY'S SCHEME OF INTELLECTUAL AND MORAL DEVELOPMENT

DUALISM (Positions 1 and 2)

.. Knowledge exists absolutely.
.. "Right answers" are known by authorities.
.. Tasks that require thinking about options or many points of view are confusing.
.. Diversity of opinion or uncertainty among authorities is viewed as inadequacy on their part, or an exercise "so we can learn to find The Answer for ourselves."

MULTIPLICITY (Positions 3 and 4)

.. Students accept diversity and uncertainty as legitimate but still temporary in areas where Authority "hasn't found The Answer yet."
.. Questions now can legitimately have multiple answers.
.. All opinions are equally valid outside of the Authority's realm where right-wrong still prevails.
.. Students are unable to adequately evaluate points of view, and question the legitimacy of doing so.

RELATIVISM (Position 5 and 6)

.. All knowledge (including authority's) now is viewed as contextual and relativistic.
.. Dualistic right-wrong thinking exists only within certain contexts.
.. Authorities are no longer resisted, but can be valued for their expertise.
.. Differing perspectives are now not merely acknowledged, but seen as pieces of a larger whole.
.. Personal Commitments are seen as ways to orient oneself in a relativistic world (vs. unconsidered commitment to simple belief in certainty).

COMMITMENT IN RELATIVISM (Positions 7, 8, and 9)

.. Students have a growing realization that they need to find their own choices, based on multiple "truths."
..They move "off the fence" and begin to align choices with personal themes.
.. Active affirmation of themselves and their responsibilities in a pluralistic world clarifies identity.
.. Personal commitments in such areas as marriage, religion, and career are made from a relativistic frame of reference.

Adapted from A. W. Chickering & L. Reisser (1993). Education and Identity, 2nd ed, 1993, Jossey Bass.

## BELENKY, CLINCHY, GOLDBERGER, AND TARULE
## WOMEN'S WAYS OF KNOWING

SILENCE

.. "women experience themselves as mindless and voiceless and subject to the whims of external authority" (p. 15). Knowledge is certain.

RECEIVED KNOWLEDGE

.. the perspective "from which women conceive of themselves as capable of receiving, even reproducing, knowledge from the all-knowing external authorities but not capable of creating knowledge on their own" (p. 15). Knowledge is certain.

SUBJECTIVE KNOWLEDGE

.. "a perspective from which truth and knowledge are conceived as personal, private and subjectively known or intuited" (p. 15). Some knowledge is uncertain.

PROCEDURAL KNOWLEDGE

.. "is a position in which women are invested in learning and applying objective procedures for obtaining and communicating knowledge" (p. 15).

Separate Knowing

Separate knowers rely on "impersonal procedures for establishing truth" (p. 102), such as methods of critical thinking taught in academic disciplines.

Connected Knowing

Connected knowers appreciate the value of observation and analysis, but they realize that personal experience is an important part of knowledge.

CONSTRUCTED KNOWLEDGE

In Constructed Knowledge, "women view all knowledge as contextual, experience themselves as creators of knowledge, and value both subjective and objective strategies for knowing" (p. 15).

From M. F. Belenky, B. M. Clinchy, N. R. Goldberger, and J. M. Tarule. (1986). Women's Ways of Knowing. New York: Basic Books.